

M. Bate, H. Blau, J. Gurdon, M. West-  
erfield, speakers  
Posttranscriptional control of maternal  
RNA: M. Wickens, discussion leader  
D. Melton, R. Lehmann, S. Strickland,  
speakers  
Down stream of transcription factors: S.  
Tilghman, discussion leader  
B. Meyer, M. Levine, M. Scott, R. Krum-  
lauf, speakers  
Cell lineage and expression of homeo-  
domain selector genes: P. Lawrence,  
discussion leader  
A. Lumsden, W. Bender, J. Way, speak-  
ers  
Evolution and redundant pathways in  
development: L. Wolpert, discussion  
leader  
R. Raff, C. Nusslein-Volhard, R. Jae-  
nisch, speakers

## Drug Metabolism

### Holderness School, Plymouth, NH

C. J. Parli, chair; T. A. Baillie, vice  
chair

#### 11-16 July

The molecular biology and regulation of  
glucuronidation and sulfation: T. R.  
Tephly, discussion leader  
P. Mackenzie, "Molecular and evolu-  
tionary aspects of UDP-glucuronosyl-  
transferases."  
M. D. Green, "Species differences in the  
structure and function of UDP-glucur-  
onosyltransferases which catalyze the  
glucuronidation of common substrates."  
C. Falany, "Human cytosolic phenol sul-  
fotransferases."  
Peroxisome proliferators, cytochromes  
P-450, and hepatocarcinogenicity: S.  
H. Weinstein, discussion leader  
R. T. Okita, "Peroxisome proliferators  
and cytochrome P-450-mediated reac-  
tions."  
J. A. Popp, "Peroxisome proliferators  
and hepatocarcinogenicity."  
Metabolism of agrochemicals: T. A.  
Baillie, discussion leader  
E. Hodgson, "Monooxygenation of pes-  
ticides."  
G. L. Lamoureux, "Current trends in  
plant herbicide metabolism research."  
D. H. Hutson, "Conjugation reactions:  
The significance of the mundane, the  
unusual and the exotic."  
Non-mammalian models in drug metab-  
olism: M. O. James, discussion leader  
J. J. Stegeman, "Species similarities  
and differences in cytochrome P-450  
forms, function, and regulation: The va-  
lidity of extrapolation between species."  
M. O. James, "Understanding phase II  
metabolism in non-mammalian species:  
can facilitate the interpretation of spe-  
cies differences in toxicological re-  
sponses."  
The use of in vitro metabolism studies in  
the understanding of new drugs: S. H. L.  
Chiu, discussion leader  
R. Borchardt, "The use of cultured intes-  
tinal epithelial (Caco-2) cells to study  
drug transport and metabolism."  
S. Spielberg, "Characterization of hetero-  
geneity in reactive drug metabolite  
detoxification using readily obtained hu-  
man cells."  
Y. Sugiyama, "Prediction of in vivo drug  
metabolism from in vitro data based on  
physiological pharmacokinetic model-  
ing."  
Novel reaction mechanisms: J. M. Math-  
ews, discussion leader  
H. T. Nagasawa, "Oxidation of xenobi-

otics to nitroxyl (HN=O)-generating in-  
termediates."

J. D. de Bethizy, "N-glucuronidation: A  
novel pathway for nicotine metabolism."  
Metabolically defined and genetically  
engineered cell lines as tools to eluci-  
date drug metabolism: D. W. Roberts,  
discussion leader

F. J. Gonzalez, "cDNA-directed expres-  
sion of human P-450s: Use in drug  
development and safety assessment."

J. Doeber, "Genetically engineered  
V-79 Chinese hamster cells stably ex-  
pressing cytochrome P-450s: Applica-  
tions in drug metabolism and toxicity  
studies."

J. E. Snawder, "Cytochrome P-450-  
dependent metabolism and cytotoxicity  
of acetaminophen in HepG2 cells and  
four human transgenic lymphoblastoid  
cell lines."

M. S. Tempesta, "Pharmacognosy in  
the 90's."

Evolving bioanalytical techniques in  
drug metabolism: L. J. Klunk, discussion  
leader

I. A. Blair, "Chemical reaction interface  
mass spectrometry: An alternative to  
radioisotopes for studies in drug metab-  
olism."

M. A. Moseley, "Applications of CZE  
and CZE-MS in drug metabolism."

## Dynamics of Gas-Surface Interactions

### Proctor Academy, Andover, NH

H. Metiu, chair; R. Cavanagh, vice  
chair

#### 1-6 August

J. Yates, discussion leader  
A. Kleyn, "Time-resolved IR spectroscopy  
of zeolites."  
S. Ceyer, "Dynamics of hydrogen absorp-  
tion into nickel and the chemistry of  
bulk hydrogen."  
TBA, discussion leader  
C. Rettner, "Quantum site-specific dy-  
namics of the dissociation of hydrogen  
on Cu(111)."  
J. Tully, discussion leader  
S. Sibener, "Molecular beam studies of  
surface dynamics."  
E. Carter, "First principles derived dy-  
namics of chemical processes on  
Si(100)."  
TBA, discussion leader  
M. Head-Gordon, "Non-adiabatic inter-  
actions between molecules and metal  
surfaces."  
M. Lagally, discussion leader  
G. McClelland, "Observing a single ad-  
sorbed atom with picosecond and sub-  
nanometer resolution."  
P. Avouris, "STM induced modifications  
and electrical properties of surfaces on  
an atomic scale."  
G. Comsa, discussion leader  
T. Michely, "Surface morphology during  
homepitaxial growth."  
TBA, discussion leader  
R. Hochstrasser, "Ultrafast vibrational  
processes in condensed phases on sur-  
faces: Contrasts and similarities."  
J. Stephenson, "Ultrafast laser studies  
of energy flow: Adsorbate vibrations,  
lattice phonons, and hot electrons."  
E. Hasselbrink, "Photochemistry on  
metal surfaces."  
TBA, discussion leader  
J. Trautman, "Near-field optics of sur-  
faces."  
TBA, discussion leader

A. Vlieg, "X-ray diffraction studies of  
surface dynamics."

P. Estrup, "Effect of surface structure  
change on kinetics: Hydrogen on met-  
al."

R. Haight, "Semiconductor surface  
electron dynamics studies subpicosec-  
ond photoemission."

## Dynamics of Simple Systems

### Proctor Academy, Andover, NH

J. L. Friar, chair; R. S. Berry, vice  
chair

#### 15-20 August

J. de Swart, "Nucleon-nucleon partial-  
wave analyses and nucleon-nucleon  
potentials."  
S. Wallace, "Relativistic bound states  
and form factors: The quasipotential ap-  
proach."  
J. Carlson, "Monte Carlo approaches to  
structure and dynamics in light nuclei."  
L. Knutson, "Few-nucleon experiments  
at low energies."  
N. Rodning, "Multi-nucleon photoemis-  
sion measurements using a large ac-  
ceptance detector."  
F. Gross, "Recent progress in the rela-  
tivistic few-body problem."  
D. Lehman, "Continuum Faddeev cal-  
culations and electromagnetic interac-  
tions."  
A. Picklesimer, "A few deltas in a few  
few-nucleon systems."  
G. Hale, "R-matrix methods for studying  
nuclear effects in muon-catalyzed fu-  
sion."  
D. Campbell, "Complexity in simple sys-  
tems."  
A. Bulgac, "Random matrices and inter-  
actions between slow and fast degrees  
of freedom."  
J. Cina, "Large-amplitude nuclear mo-  
tion and electronic response."  
J. Doering, "(a,3e) experiments to probe  
electron correlations in atoms."  
M. Dunn, "Higher angular momentum  
states in D dimensions."  
G. Ezra, "Semiclassical aspects of few-  
body Coulomb systems."  
W. Johnson, "Diagonalizing the No-pair  
Hamiltonian for the He isoelectronic se-  
quence."  
M. Kellman, "Dynamical analysis of  
highly excited molecular vibrational  
spectra."  
A. Pines, "Spin dynamics and geome-  
try."  
J. Shertzer, "Finite element analysis of  
two-electron systems."  
K. Rademann, "Electronic interactions  
in small clusters of atoms: Nonmetal-to-  
metal transitions in mercury, cadmium,  
and zinc."  
M. Gutzwiller, TBA  
J.-M. Rost, "A non-perturbative ap-  
proach to multiple fragmentation of few-  
body systems."

## Elastin

### Kimball Union Academy, Meriden, NH

R. Senior, chair; C. Boyd, vice  
chair

#### 8-13 August

Tropoelastin gene: Structure and evolu-  
tion: C. Boyd, discussion leader  
C. Boyd, "Tropoelastin gene: An over-  
view."

J. Schwarzbauer, "A lesson in structure:  
Function relationships from analysis of  
the fibronectin gene."

F. Kaeley, "Lamprin: An elastic protein  
in invertebrates."

Regulation of elastin production: W.  
Parks, discussion leader

W. Parks, "Developmental regulation of  
elastin production."

R. Pierce, "Posttranscriptional control of  
tropoelastin expression."

J. Uitto, "Elastin regulation in transgenic  
mice."

J. Foster, "IGF-1 responsive elements  
in the tropoelastin gene."

Microfibrils: L. Sakai, discussion leader  
L. Sakai, "Structure and assembly of  
microfibrils."

G. Corson, "Sequence analysis of func-  
tional domains in fibrillin."

F. Ramirez, "Structure and expression of  
fibrillins."

M. Gibson, "Cloning of a new fibrillin-  
like protein (FLP)."

Molecular pathology of the elastin-asso-  
ciated microfibril: H. Dietz, discussion  
leader

L. Peltonen, "One class of marfan mu-  
tations: Truncated fibrillin polypeptide  
chains."

U. Franke, "Genotype-phenotype cor-  
relations of fibrillin mutations."

H. Furthmayr, "Biosynthesis and pro-  
cessing of defective fibrillin in marfan  
syndrome."

H. Dietz, "Pathobiology of Marfan syn-  
drome: Early lessons from genotype as-  
sessment."

Elastic fiber assembly: R. Mecham, dis-  
cussion leader

E. Cleary, "Proteoglycans in elastic fiber  
assembly."

G. Bressan, "Identification of a gp 115-  
enriched domain within elastic fibers."

L. Robert, M. P. Jacob, "The elastin  
receptor, its transmission pathway, and  
role in physiology and pathological cell  
functions."

Lysyl oxidase: H. Kagan, discussion  
leader

H. Kagan, "Substrate specificity and  
catalytic mechanism of lysyl oxidase."

R. Friedman, "Characterization and Ras  
suppressor function of the mouse lysyl  
oxidase gene."

P. Trackman, "Regulation of lysyl oxi-  
dase expression."

Elastin Turnover: R. Senior, discussion  
leader

H. Chapman, "Regulation of cathepsin  
S expression by human monocytes/  
macrophages."

E. Campbell, "The clinical spectrum of  $\alpha$   
1-antitrypsin deficiency."

J. Brown, "Structural requirements for  
secretion of  $\alpha$  1-antitrypsin."

M. Glass, "Biochemical markers of pro-  
teolysis in controlled clinical trials."

J. Rosenbloom, discussion leader

Pathobiology of elastic tissue: Failed  
repression of elastase elastin and cell  
proliferation: M. Rabinovitch, discussion  
leader

M. Rabinovitch, "Failed repression on  
vascular elastase: Impact on cellular  
and molecular mechanisms."

R. Rosenberg, "Failed repression of vas-  
cular smooth muscle cell proliferation:  
Deregulation of proto-oncogenes and  
antisense therapy."

A. Hinek, "The elastin binding 'companion'  
protein as a regulator and deregula-  
tor of vascular extracellular matrix pro-  
duction and assembly."

B. Starcher, "Lessons from genetic  
strains of mice on the regulation of elas-